

AMENDMENTS TO THE SPECIFICATION:

Please replace the paragraph beginning at page 3, line 27 with the following rewritten version:

According to a first aspect of the present invention, a weight detecting apparatus for detecting a weight of an object includes weight detecting means, first vibration detecting means, second vibration detecting means and weight calculating means. The weight detecting means has a fixed end kept in a fixed state, and has a free end bearing a weight of the object. The first vibration detecting means is arranged on a fixed end side of the weight detecting means for detecting a vibration component. The second vibration detecting means is arranged on a free end side of the weight detecting means for detecting a vibration component. The weight calculating means removes the vibration components from a detection signal provided from the weight detecting means based on the detection signals provided from the weight detecting means and the first and second vibration detecting means, and thereby calculates the weight of the object.

Please replace the paragraph beginning at page 4, line 10 with the following rewritten version:

According to the first aspect of the present invention, the first and second vibration detecting means detect the vibration components on the fixed end side and the free end side of the weight detecting means, and the vibration components thus detected are removed from the detection signal of the weight detecting means so that only the signal matching with the weight of the object can be obtained, and the object weight can be detected with improved precision.

Please replace the paragraph beginning at page 4, line 16 with the following rewritten version:

According to a second aspect of the present invention, the weight detecting apparatus of the first aspect of the present invention further has such a feature that the weight calculating means calculates the vibration component on the free end side of the weight detecting means based on the detection signals provided from the first and second vibration detecting means.

Please replace the paragraph beginning at page 4, line 21 with the following rewritten version:

According to the second aspect of the present invention, the weight detecting apparatus of the first aspect of the present invention ~~embodiment~~ has more specific structures. When the vibration components on the fixed end side of the weight detecting means are present together with the vibration component on the free end side, it is possible to calculate the vibration component on the free end side, which is impossible in the prior art.

Please replace the paragraph beginning at page 4, line 26 with the following rewritten version:

According to a third aspect of the present invention, the weight detecting apparatus of the first or second aspect of the present invention further has such a feature that the weight calculating means calculates the weight of the object by performing arithmetic processing for correction on the detection signals provided from the weight detecting means, the first vibration detecting means and the second vibration detecting means, and thereby removing the vibration component on the fixed end side and the vibration component on the free end side from the detection signal of the weight detecting means.

Please replace the paragraph beginning at page 5, line 5 with the following rewritten version:

In general, ~~generally~~, characteristics such as sensitivity of each detecting means are set in accordance with a level of weight to be detected, a vibration mode or the like.

Please replace the paragraph beginning at page 5, line 8 with the following rewritten version:

According to the third aspect of the present invention, even when each detecting means has characteristics different from those of the other detecting means, the weight calculating means can perform the arithmetic processing between the detection signals provided from the different detecting means, respectively, and the arithmetic processing for correction can be effected on the respective detection signals. Due to differences between target loads, restrictions on the installation space and others, the first and second vibration detecting means may be smaller in size than the weight detecting means. The third aspect of

the present invention is particularly effected for such a case.

Please replace the paragraph beginning at page 5, line 17 with the following rewritten version:

According to a fourth aspect of the present invention, the weight detecting apparatus according to the first, second or third aspect of the present invention has such a feature that the weight detecting means has an A/D converter, an arithmetic circuit and a low-pass filter. The A/D converter receives the detection signals provided from the weight detecting means, the first vibration detecting means and the second vibration detecting means. The arithmetic circuit receives an output signal of the A/D converter. The low-pass filter receives an output signal of the arithmetic circuit.

Please replace the paragraph beginning at page 5, line 24 with the following rewritten version:

According to a fifth aspect of the present invention, the weight detecting apparatus according to the first, second or third aspect of the present invention has such a feature that the weight calculating means has an A/D converter, a low-pass filter and an arithmetic circuit. The A/D converter receives the detection signals provided from the weight detecting means, the first vibration detecting means and the second vibration detecting means. The low-pass filter receives an output signal of the A/D converter. The arithmetic circuit receives an output signal of the low-pass filter.

Please replace the paragraph beginning at page 6, line 2 with the following rewritten version:

The fourth and fifth aspects of the present invention ~~inventions~~ provide more specific structures of the weight calculating means. Particularly, according to the fifth aspect of the present invention, even when the arithmetic circuit has an insufficient capability with respect to a sampling period of the detection signal of each detecting means, provision of the low-pass filter maintains an appropriate arithmetic efficiency of the arithmetic circuit.